

REMARKS

Claims 1-13 were pending and considered by the Examiner. Claims 1-13 were rejected in an Office Action designated as Final. In response, Applicants request entry of amendments to claims 1, 8, 9 and 13, cancellation of claim 3 and consideration of the remarks to follow. Upon entry of this Amendment, claims 1, 2 and 4-13 will remain pending. Entry of this Amendment, reconsideration and allowance of claims 1, 2 and 4-13 are respectfully requested.

Claims 9 and 13 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claim 8 of co-pending application 09/870,921. Since this is a provisional obviousness-type double patenting rejection, it is believed that no response is required at the present time.

The Examiner has repeated the rejections from the previous Office Action. Claims 1-10 and 13 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 3,021,802 (Glas). The Examiner specifically refers to Fig. 9 and "motors" 205 and 205' therein. Claims 1-3 and 8-13 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,878,569 (Satzler). Claims 1-10 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 2,867,088 (Kux). In response, claim 3 has been cancelled, and independent claims 1, 8, 9 and 13 have been amended. It is respectfully submitted that the invention recited in independent claims 1, 8, 9 and 13 is patentably different from the teachings of Glas, Satzler and Kux, alone or in combination.

In comments on Applicants' arguments in the previous amendment, the Examiner states that the limitations relied upon were not recited in the rejected claims. It is believed that the remarks referred to by the Examiner from Applicants' previous arguments were simply definitions from the Detailed Description of the terms "hydraulic transformer" and "hydraulic

CAT0073.US

PATENT
Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 3745

motor" that were used in the claims, and that emphasize differences between the invention recited in the claims and the dissimilar structures of the references. The remarks merely highlighted the definitions of these terms as given in the Detailed Description portion of the application. Nevertheless, independent claims 1, 8, 9 and 13 have each been amended to now clearly recite these features.

Specifically, in contrast to the teachings of the prior art, independent claims 1, 8, 9 and 13, as now amended, each recite:

said transformer being adjustable to control pressure amplification of a fluid flowing therethrough;

claims 1 and 8, as now amended, further recite:

at least one hydraulic motor having an output shaft and being adjustable to provide at least one of a controlled output speed and output torque associated with said output shaft;

and claims 9 and 13, as now amended, further recite:

at least two of said hydraulic motors having an output shaft and being adjustable to provide at least one of a controlled output speed and output torque associated with said output shaft

It is respectfully submitted that amended claims 1, 8, 9 and 13 recite an invention not taught by Glas, Satzler or Kux, alone or in combination, which includes advantages over the prior art.

CAT0073.US

Fig. 9 of Glas, which the Examiner has specifically referred to, is described from column 6, line 52 through column 7, line 16. The structure includes a cylinder block 201, a working ram 205, a setoff piston 206 and a dividing wall 202 separating chambers 203 and 204. Covers 207 and 209 cover chamber 203 and 204. A valve member 213 is operated by a ram 214. Connection bores 249, 216 and 252, and conduits 250 and 253 leading to bores 251 and 254 are provided. A second piston 205' is received in a chamber 228, and a piston rod 229 is guided in a hollow piston rod 208 of working ram 205. The structure is provided for a hydraulic press for pressing together two sheets of a work piece to be riveted together. Piston rod 229 and working ram 205' operate on a riveting stem disposed on the end of the bore of piston rod 208. At least one bore 233 connects a chamber portion 232 of chamber 228 with chamber portion 203b so that the pressure medium may be shifted from the chamber portion 232 into the chamber portion 203b during the advancing stroke of working ram 205' and the return stroke of working ram 205' may enter chamber portion 232.

Satzler teaches an energy conversion system for utilizing energy from a source of pressurized fluid, such as a free piston engine and a storage accumulator. A free piston engine 12 delivers a predetermined volume of pressurized fluid per stroke of the free piston engine. The pressurized fluid is received and stored in an accumulator 20. When the pressure of accumulator 20 reaches a predetermined maximum pressure level free piston engine 12 is turned off. When the pressure in accumulator 20 falls below a predetermined level free piston engine 12 is started, to deliver pressurized fluid to accumulator 20. Pump motors are provided in power modifying units to provide different output flow and pressure characteristics for the fluid provided therefrom. The power modifying units operate to efficiently reduce the pressure level of the fluid provided from the accumulator. In using pressurized fluid from the energy conservation system, a

CAT0073.US

PATENT
Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 3745

control arrangement selects the path of pressurized fluid having the lowest pressure level needed to perform the required task. Thus, hydraulic energy is utilized efficiently.

Kux teaches a hydraulic pressure multiplier or booster. A cylinder structure 15 includes a relatively long section 16 of relatively smaller diameter and a relatively short section 17 of relatively larger diameter. One end portion of section 16 is reduced in diameter and is received in section 17. The end of section 16 is provided with an annular recess which receives a suitable sealing ring 18 to afford a fluid tight engagement between the sections. A center tube 27 is located axially within communicating bores of sections 16 and 17. An intensifier piston 38 is supported on tube 27 and has an enlarged portion 39 which fits in the bore of section 17 and a reduced portion 41 which fits in the bore of section 16. Fluid is pumped through a conduit 81, a port 34 and through center tube 27 outwardly through apertures 37 into the bore of section 16 to act on a piston 54 and effect downward movement thereof.

Thus, Glas teaches a hydraulic press having a ram that may include one or more pistons therein; Satzler teaches an energy conservation system that includes modifying units to reduce the pressure from a source, and switch means to select the modifying unit providing the minimal pressure level suitable for the task; and Kux teaches a pressure multiplier. Neither Glas, Satzler nor Kux, alone or in combination, teaches or suggests a hydraulic system or work machine including a hydraulic transformer that is adjustable to control the pressure amplification of hydraulic fluid flowing therethrough and a hydraulic motor adjustable to provide an output shaft thereof with a desired rotational speed and/or torque operatively coupled to each other as recited in amended independent claims 1, 8, 9 and 13. The present invention allows a hydraulic motor to operate within two different operating ranges, depending upon whether the pressure received at the motor inlet is a non-amplified pressure directed from an accumulator, or an amplified pressure

CAT0073.US

PATENT
Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 3745

from the hydraulic transformer. It is thus possible to utilize a smaller motor over a wider range of operating conditions by providing both non-amplified and amplified hydraulic pressure sources, and selectively coupling the motor to one or the other of the sources. Further, hydraulic motors of a different size, torque and efficiency can be provided, with one or the other of the motors operatively connected to the load so that the most efficiently operating motor for the conditions present can be used. Each of the different size hydraulic motors is operated only within its most efficient range, and when one or the other motor begins to operate outside of an efficient range, the hydraulic system switches to provide power from the other, more efficiently operating motor. Thus, one motor can be provided which operates at higher efficiency at low speed and high torque requirements, and a second motor can be provided which operates at higher efficiency at higher speed and lower torque requirements.

It is respectfully submitted that claims 1, 8, 9 and 13 therefore recite an invention neither anticipated by, nor obvious from the teachings of Glas, Satzler or Kux, alone or in combination. Accordingly, this Amendment should be entered in that claim 1 together with claims 2 and 4-7 dependent therefrom, claim 8, claim 9 and claims 10-12 dependent therefrom and claim 13 are placed in condition for allowance.

For the foregoing reasons, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The proposed amendments therefore should be entered in that the pending claims are placed in condition for allowance. Applicants respectfully request entry of this Amendment, withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally
CAT0073.US

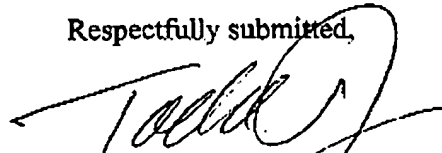
PATENT
Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 3745

petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095,

TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to
telephone the undersigned at (260) 897-3400.

Respectfully submitted,



Todd T. Taylor
Registration No. 36,945

OFFICIAL

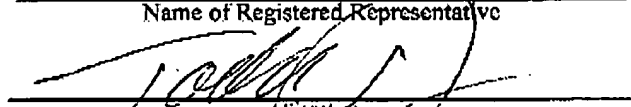
Attorney for Applicant

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being transmitted via
facsimile to the U.S. Patent and Trademark Office, on: August 22, 2003.

Todd T. Taylor, Reg. No. 36,945

Name of Registered Representative



Signature

August 22, 2003

Date

TTT5/ar

TAYLOR & AUST, P.C.
142 S. Main Street
P.O. Box 560
Avilla, IN 46710
Telephone: 260-897-3400
Facsimile: 260-897-9300

FAX RECEIVED

AUG 22 2003

GROUP 3700

CAT0073.US